

What is claimed is:

- 1                   1. A method of operating an access network infrastructure in  
2 connection with a plurality of service networks comprising the steps of:  
3                   creating a service policy message specifying a service class for  
4 communications with a network access device after notification that a network  
5 address, associated with a service network, has been allocated to the network  
6 access device;  
7                   transmitting the service policy message to a service policy  
8 enforcement point in the access network infrastructure.
- 1                   2. The invention of claim 1 wherein the service policy  
2 enforcement point schedules access to the access network infrastructure based on  
3 the service class specified in the service policy message.
- 1                   3. The invention of claim 2 wherein the service policy  
2 enforcement point schedules access using class based queuing.
- 1                   4. The invention of claim 2 wherein the service policy  
2 enforcement point polices access to the access network infrastructure based on the  
3 service class specified in the service policy message.
- 1                   5. The invention of claim 1 wherein the access network  
2 infrastructure comprises a hybrid fiber coaxial network.
- 1                   6. The invention of claim 5 wherein the service policy  
2 enforcement point is a cable modem termination system.
- 1                   7. The invention of claim 1 wherein the service networks utilize  
2 the Internet Protocol and wherein the addresses are Internet Protocol addresses.
- 1                   8. The invention of claim 7 wherein the plurality of service  
2 networks are operated by different Internet Service Providers.

1                   9. The invention of claim 7 wherein the plurality of service  
2 networks offer access to different Internet Protocol-based services.

1                   10. The invention of claim 1 wherein the network address is  
2 allocated using a host configuration protocol.

1                   11. The invention of claim 10 wherein the host configuration  
2 protocol is DHCP.